



# 2003 MICHIGAN SPRING TURKEY HUNTER SURVEY

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## ABSTRACT

*A survey of turkey hunters was conducted following the 2003 spring hunting season to determine turkey harvest and hunter participation. In 2003, nearly 89,000 hunters harvested about 33,000 turkeys. Statewide, 38% of hunters harvested a turkey. The 2003 turkey harvest was 8% higher than the 2002 harvest and was the largest harvest in Michigan's history. The number of people hunting turkeys increased by 2%, and hunting effort increased by 3% between 2002 and 2003. Nearly 61% of the hunters rated their hunting experience as excellent, very good, or good. About 86% of the hunters reported that they experienced no or only minor interference from other hunters.*

## INTRODUCTION

Michigan's spring turkey (*Meleagris gallopavo*) hunting season was based on an area and quota system. This system was set up primarily to distribute hunters across geographic areas (management units) and time (hunt periods). The goal of this system has been to provide hunting opportunities while maintaining acceptable levels of hunter satisfaction (Luukkonen 1998).

In 2003, 78% of the state (44,540 square miles) was open for wild turkey hunting from April 21 through May 31 (Figure 1). The area open for turkey hunting was the same as in 2002. The hunting area was divided into 33 management units (Figure 1). Hunting licenses were available for three types of hunts on these management units: (1) licenses for quota hunts on a specific management unit, (2) licenses for a quota hunt on private lands in southern Michigan (Hunt 301), and (3) licenses for an unlimited quota hunt that included all units (Hunt 234).

A licensed hunter was allowed to take one bearded turkey. A limited number of licenses were available for quota hunts, and they were valid only in a certain



A contribution of Federal Aid in Wildlife Restoration, Michigan Project W-147-R

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management unit and only during a limited time period (7-20 days). Most quota hunts began before May 5 and lasted for 7 days. A private land management unit (Unit ZZ) was created in 2003 that included all private lands in southern Michigan (Figure 1). Hunters who selected Hunt 301 could hunt the first two weeks of the season (April 21-May 4) anywhere on private lands in Unit ZZ. This unit and hunt period was created to provide additional hunting opportunity and increased flexibility for hunters who had difficulty finding time to hunt during shorter quota hunts.

Licenses for Hunt 234 could be used in any management unit except on public lands in the southern Michigan Unit ZZ (Figure 1). Hunt 234 started later than most quota hunts but lasted for 27 days (May 5-31). An unlimited number of licenses were available for Hunt 234. Beginning in 2003, hunters could purchase a hunting license for Hunt 234 during the application period (January 1-February 1) without applying for this hunt, although hunters could still obtain a license for Hunt 234 through the lottery process.

The Wildlife Division used a lottery system (random selection process) to distribute hunting licenses among applicants. Each applicant in the lottery could select up to two hunt choices (any combination of quota and unlimited quota hunts). The lottery consisted of two drawings. The first drawing was used to select applicants based on their preferred hunt choice. The second drawing was among applicants that were not successful in the first drawing, and was based on the hunter's second choice for a hunt. Applicants unsuccessful in the two drawings could purchase any unclaimed licenses on a first-come, first-served basis, or choose to purchase a license for the unlimited quota hunt period (Hunt 234).

The Wildlife Division has the authority and responsibility to protect and manage the wildlife resources of the State of Michigan. Harvest surveys are one of the management tools used by the Wildlife Division to accomplish its statutory responsibility. Estimating harvest, hunting effort, and hunter satisfaction are the primary objectives of this survey.

## **METHODS**

Beginning in 2003, the Wildlife Division provided hunters the option to voluntarily report information about their turkey hunting activity via the Internet. This option was advertised in the hunting regulation booklet and through a statewide news release. Hunters could report information anytime during the hunting season. Hunters reported whether they hunted, the days spent afield, whether they harvested a turkey, and whether other hunters caused interference during their hunt (none, minor, some irritation, or major problem). Successful hunters were asked also to report where their turkeys were taken (public or private land), date of harvest, and beard length of the harvested bird. Birds with a beard less than 6 inches were classified as juveniles (1 year old), while birds with longer beards were adults (2 years old or greater). Finally, hunters rated their overall hunting experience (excellent, very good, good, fair, or poor).

Following the 2003 spring turkey hunting season, a questionnaire was sent to 23,927 randomly selected people that had purchased a turkey hunting license (resident turkey, senior resident turkey, and nonresident turkey licenses) and had not already voluntarily

reported harvest information via the Internet. Hunters receiving the questionnaire were asked to report the same information that was collected from hunters that reported voluntarily on the Internet.

Estimates were calculated using a stratified random sampling design that included 34 strata (Cochran 1977). Hunters were stratified based on the management unit where their license was valid (31 management units). Hunters who purchased a license that could be used in multiple management units (hunts 234 and 301) were treated as separate strata. Moreover, people that had voluntarily reported information about their hunting activity via the Internet were treated as a separate stratum. A 95% confidence limit (CL) was calculated for each estimate. This confidence limit could be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval was a measure of the precision associated with the estimate and implies that the true value would be within this interval 95 times out of 100. Estimates were based on information collected from random samples of hunting license buyers. Thus, these estimates were subject to sampling errors (Cochran 1977). Estimates were not adjusted for possible response or nonresponse biases.

Questionnaires were mailed initially during mid-June 2003, and a reminder note and two follow-up questionnaires were mailed to nonrespondents. Although 23,927 people were sent the questionnaire, 293 surveys were undeliverable resulting in an adjusted sample size of 23,634. Questionnaires were returned by 18,064 people, yielding a 76% adjusted response rate. In addition, 2,907 people voluntarily reported information about their hunting activity via the Internet.

## **RESULTS AND DISCUSSION**

In 2003, 136,470 people applied for the quota hunts or purchased a license for hunt 234 during the January 1-February 1 application period. A total of 107,866 licenses were purchased for the spring turkey hunting season, an increase of 10% from 2002. Most of the people buying a license were men (94%), and the average age of the license buyers was 43 years (Figure 2). Nearly 7% (8,003) of the license buyers were younger than 17 years old.

About 82% ( $\pm 1\%$ ) of these license buyers hunted turkeys (88,912 hunters). Most of these hunters were men ( $83,377 \pm 660$ ), although nearly 6% ( $\pm 1\%$ ) of the hunters were women ( $5,535 \pm 365$ ). Hunter numbers increased by 2% from 2002 (Tables 1 and 2). Counties having more than 2,000 hunters afield included Montcalm, Newaygo, Kent, Allegan, Barry, Tuscola, Lapeer, Alcona, Jackson, and Lake (Table 2).

Hunters spent an estimated 400,531 days afield pursuing turkeys ( $4.5 \pm 0.1$  days/hunter), an increase of 3% from 2002, and harvested approximately 33,369 birds (Figure 3). Counties with hunters taking more than 1,000 turkeys included Montcalm, Newaygo, Kent, and Allegan (Table 2). Hunter success was 38% in 2003, compared to 35% hunter success in 2002. The number of turkeys harvested in 2003 was the largest harvest in Michigan's history.

About 37% ( $\pm 1\%$ ) of the harvested birds were juvenile males ( $12,373 \pm 534$ ); 62% ( $\pm 1\%$ ) were adult males ( $20,549 \pm 618$ ), and about 1% were bearded females ( $337 \pm 82$ ). Additionally, the age of a small number of harvested birds ( $<1\%$ ) was unknown ( $110 \pm 64$ ).

Hunting effort and the number of turkeys harvested were generally highest during the earliest hunting periods (Figures 4-7). For turkeys that the harvest date was known, 38% of these birds were taken during April 21-27. Daily hunter success generally was more than 8% during April. Daily hunter success was above  $>6\%$  until about May 11, but declined slightly to near 5% for the remainder of May. Hunting effort and harvest also generally was greater on the weekends than weekdays, especially on Saturdays.

About 76% of turkey hunters hunted solely on private land; 16% hunted on public land only; and 7% hunted on both private and public lands (Table 3). Of the 33,369 turkeys harvested in 2003,  $87 \pm 1\%$  of these birds were taken on private land ( $29,172 \pm 698$  birds). About  $13 \pm 1\%$  of the harvest ( $4,180 \pm 361$  birds) were taken on public land.

Hunter satisfaction is one measure used to assess the turkey management program in Michigan. Of the estimated 88,912 people hunting turkeys in 2003,  $61 \pm 1\%$  of the hunters rated their hunting experience as either excellent ( $14,752 \pm 535$  hunters), very good ( $16,389 \pm 580$ ), or good ( $23,050 \pm 654$ ) (Table 4). Nearly  $21 \pm 1\%$  of the hunters rated their experience as fair ( $18,463 \pm 624$  hunters). Only  $16 \pm 1\%$  of the hunters rated their experience as poor ( $14,575 \pm 581$  hunters). About 2% of the hunters ( $1,683 \pm 188$  hunters) failed to rate their hunting experience.

Hunter satisfaction is affected by many factors such as hunting success and whether hunting activities were completed without interference. In 2003,  $63 \pm 1\%$  of the hunters reported no hunter interference;  $23 \pm 1\%$  reported minor interference;  $9 \pm 1\%$  reported some irritation caused by hunter interference; and  $2 \pm 1\%$  reported that hunter interference was a major problem (Table 5).

Although interference can affect hunter satisfaction, hunter satisfaction was more closely associated with hunter success (Figures 8 and 9). Hunter success increased from 35 to 38% between 2002 and 2003, and hunter satisfaction also increased slightly from 60 to 61%. Hunter success was high in all hunt periods, although hunters pursuing turkeys during the earlier hunt periods were generally more successful and more satisfied than people hunting during the later periods (Table 6).

Compared to 2002, only southern Michigan experienced an increase in the number of people hunting turkey and increased hunting effort in 2003 (Table 7). This increase in hunting effort was accomplished while also increasing hunter success in southern Michigan. Hunter satisfaction increased slightly, and hunter interference was unchanged between 2002 and 2003 in southern Michigan (Table 8).

## **ACKNOWLEDGEMENTS**

I thank all the turkey hunters that provided information. Kelly DeGrandchamp, Theresa Riebow, and Becky Walker completed data entry. Mary Benson, Rebecca Humphries, Pat Lederle, William Moritz, Al Stewart, and Valerie Tuovila reviewed a previous version of this report.

## **LITERATURE CITED**

Cochran, W. G. 1977. Sampling techniques. John Wiley & Sons, New York. USA

Luukkonen, D. R. 1998. Spring wild turkey hunting regulation issues in Michigan. Wildlife Division Issue Review Paper 4. Michigan Department of Natural Resources, Lansing, USA

Table 1. Number of hunters, harvest, and hunting efforts during the spring 2003 Michigan turkey hunting season.

Manage- ment unit	Licenses available (quota)	Number of applicants <sup>a</sup>	Number of applicants successful		Hunters		Hunting efforts (days)		Harvest		Hunter success	
			in drawing <sup>b</sup>	Licenses sold	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL
Hunt periods with quotas												
A	2,500	2,386	2,448	1,889	1,674	72	6,491	605	597	104	36	6
AA	1,400	1,458	1,330	1,032	910	41	3,454	260	121	38	13	4
B	4,000	2,783	2,901	2,326	2,127	81	8,345	670	474	115	22	5
E	1,700	4,207	1,700	1,295	1,205	40	3,816	290	388	71	32	6
F	1,600	2,451	1,601	1,200	1,108	38	3,732	257	327	61	30	5
H	1,500	2,760	1,500	1,134	1,025	41	3,407	250	317	61	31	6
J	4,000	4,277	3,998	2,861	2,636	94	8,779	630	1,051	165	40	6
K	8,500	20,023	8,502	6,733	6,348	191	21,408	1,533	2,856	398	45	6
L	1,000	1,670	856	757	696	26	2,701	286	203	41	29	6
M	1,800	897	898	712	654	23	2,413	172	215	38	33	6
MA	700	296	299	235	225	6	815	60	68	14	30	6
N	2,200	1,418	1,428	1,174	1,080	38	3,653	272	463	65	43	6
O	2,500	1,319	1,296	970	852	40	2,959	248	328	57	38	6
P	320	505	273	220	188	11	866	79	69	14	37	7
PB	160	355	147	120	102	5	416	41	21	5	21	5
Q	1,200	1,854	935	838	726	37	2,951	325	186	44	26	6
QB	400	461	312	273	240	12	956	123	51	14	21	6
QD	40	68	39	21	19	1	81	13	8	2	44	9
R	400	933	396	285	261	11	1,173	123	75	17	29	7
RA	40	236	40	28	20	3	73	16	8	3	38	15

<sup>a</sup>Number of eligible applicants selecting the management unit as their first choice to hunt.

<sup>b</sup>Number of successful applicants was sometimes larger than quota because of system processing errors.

Table 1 (continued). Number of hunters, harvest, and hunting efforts during the spring 2003 Michigan turkey hunting season.

Management unit	Licenses available (quota)	Number of applicants <sup>a</sup>	Number of applicants successful		Hunters		Hunting efforts (days)		Harvest		Hunter success		
			in drawing <sup>b</sup>	Licenses sold	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	
Hunt periods with quotas													
S	160	873	160	98	90	4	352	42	30	7	34	7	
T	1,700	2,960	1,443	1,285	1,100	56	4,025	421	391	72	36	6	
U	1,200	1,817	1,011	917	817	38	3,422	379	296	56	36	7	
UA	1,100	1,784	777	719	646	29	2,661	281	258	45	40	7	
UB	200	275	144	118	106	5	394	57	28	7	27	7	
V	1,600	4,141	1,600	1,163	1,051	42	3,455	247	265	57	25	5	
W	800	1,332	800	595	540	22	1,795	140	214	35	40	6	
X	1,600	2,652	1,414	1,216	1,079	49	4,474	545	327	67	30	6	
Y	1,000	1,159	791	696	652	21	2,762	232	203	37	31	6	
Z	500	826	403	367	319	16	1,107	102	99	20	31	6	
ZA	600	952	560	492	442	18	1,851	222	166	28	38	6	
Subtotal	46,420	69,128	40,002	31,769	28,938	284	104,786	2,265	10,103	509	35	2	
Hunt period 301 with quota (Management Unit ZZ; April 21-May 4, 2003)													
L	NA	NA	NA	NA	1,617	124	7,032	651	786	87	47	4	
P	NA	NA	NA	NA	638	80	2,763	416	270	52	41	6	
PB	NA	NA	NA	NA	948	97	4,049	519	440	66	46	5	
Q	NA	NA	NA	NA	1,533	121	6,708	670	675	81	43	4	
QB	NA	NA	NA	NA	248	49	1,099	259	111	32	41	9	
QD	NA	NA	NA	NA	40	19	98	55	14	11	34	21	
R	NA	NA	NA	NA	1,427	117	5,960	629	672	82	46	4	

<sup>a</sup>Number of eligible applicants selecting the management unit as their first choice to hunt.

<sup>b</sup>Number of successful applicants was sometimes larger than quota because of system processing errors.

Table 1 (continued). Number of hunters, harvest, and hunting efforts during the spring 2003 Michigan turkey hunting season.

Management unit	Licenses available (quota)	Number of applicants <sup>a</sup>	Number of applicants successful		Hunters		Hunting efforts (days)		Harvest		Hunter success		
			in drawing <sup>b</sup>	Licenses sold	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	
Hunt period 301 with quota (Management Unit ZZ; April 21-May 4, 2003)													
RA	NA	NA	NA	NA	885	94	3,930	520	433	65	48	5	
S	NA	NA	NA	NA	2,803	159	11,864	852	1,287	111	45	3	
T	NA	NA	NA	NA	2,457	151	10,751	829	1,083	102	43	3	
U	NA	NA	NA	NA	1,333	113	5,423	575	654	80	47	4	
UA	NA	NA	NA	NA	673	82	3,113	470	352	59	49	6	
UB	NA	NA	NA	NA	613	78	2,517	408	245	49	39	6	
W	NA	NA	NA	NA	1,313	112	5,133	561	688	81	51	4	
X	NA	NA	NA	NA	1,485	119	6,059	605	633	79	41	4	
Y	NA	NA	NA	NA	1,129	105	4,530	522	497	70	42	5	
Z	NA	NA	NA	NA	1,770	128	7,029	618	826	89	46	4	
ZA	NA	NA	NA	NA	1,148	106	4,780	558	592	77	50	5	
Unknown	NA	NA	NA	NA	1,035	103	4,650	592	364	60	33	5	
Subtotal	65,000	25,953	27,544	24,065	22,111	138	97,489	1,619	10,622	246	48	1	
Unlimited quota hunt period (Hunt 234; May 5-31, 2003)													
A	NA	NA	NA	NA	430	101	2,212	684	90	46	18	8	
AA	NA	NA	NA	NA	385	95	2,001	719	44	33	10	7	
B	NA	NA	NA	NA	369	94	1,814	627	68	40	16	8	
E	NA	NA	NA	NA	2,179	223	9,229	1,239	640	122	29	5	
F	NA	NA	NA	NA	785	135	3,138	662	189	66	22	7	
H	NA	NA	NA	NA	1,135	162	4,919	858	99	46	8	4	

<sup>a</sup>Number of eligible applicants selecting the management unit as their first choice to hunt.<sup>b</sup>Number of successful applicants was sometimes larger than quota because of system processing errors.

Table 1 (continued). Number of hunters, harvest, and hunting efforts during the spring 2003 Michigan turkey hunting season.

Management unit	Licenses available (quota)	Number of applicants <sup>a</sup>	Number of applicants successful		Hunters		Hunting efforts (days)		Harvest		Hunter success	
			in drawing <sup>b</sup>	Licenses sold	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL
Unlimited quota hunt period (Hunt 234; May 5-31, 2003)												
J	NA	NA	NA	NA	1,622	192	7,722	1,205	545	111	31	5
K	NA	NA	NA	NA	8,600	413	41,358	2,680	2,707	245	30	2
L	NA	NA	NA	NA	1,577	191	9,752	1,597	562	114	34	6
M	NA	NA	NA	NA	268	80	887	341	73	42	25	12
MA	NA	NA	NA	NA	142	58	487	247	23	23	16	14
N	NA	NA	NA	NA	319	86	1,467	527	90	44	23	10
O	NA	NA	NA	NA	490	107	2,051	564	182	65	35	10
P	NA	NA	NA	NA	752	133	4,327	995	204	69	26	8
PB	NA	NA	NA	NA	712	129	3,434	842	336	89	45	9
Q	NA	NA	NA	NA	1,647	195	6,976	1,094	568	115	33	5
QB	NA	NA	NA	NA	367	93	1,526	470	71	40	18	9
QD	NA	NA	NA	NA	38	30	275	269	17	19	37	33
R	NA	NA	NA	NA	1,205	168	5,619	1,015	377	94	30	6
RA	NA	NA	NA	NA	878	143	4,597	987	300	84	33	7
S	NA	NA	NA	NA	1,958	212	10,052	1,439	588	116	28	5
T	NA	NA	NA	NA	2,235	226	12,204	1,669	566	115	24	4
U	NA	NA	NA	NA	1,712	199	8,516	1,364	744	131	41	6
UA	NA	NA	NA	NA	1,308	175	7,033	1,220	501	108	37	6
UB	NA	NA	NA	NA	652	124	2,414	611	261	78	38	9
V	NA	NA	NA	NA	1,351	176	5,472	855	170	62	12	4

<sup>a</sup>Number of eligible applicants selecting the management unit as their first choice to hunt.

<sup>b</sup>Number of successful applicants was sometimes larger than quota because of system processing errors.

Table 1 (continued). Number of hunters, harvest, and hunting efforts during the spring 2003 Michigan turkey hunting season.

		Number of applicants successful			Hunters		Hunting efforts (days)		Harvest		Hunter success	
Manage- ment unit	Licenses available (quota)	Number of applicants <sup>a</sup>	in drawing <sup>b</sup>	Licenses sold	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL
Unlimited quota hunt period (Hunt 234; May 5-31, 2003)												
W	NA	NA	NA	NA	1,350	177	6,383	1,222	566	115	40	6
X	NA	NA	NA	NA	1,252	170	5,935	1,122	406	96	30	6
Y	NA	NA	NA	NA	1,095	160	5,137	989	382	95	33	7
Z	NA	NA	NA	NA	1,614	193	7,571	1,223	537	111	31	5
ZA	NA	NA	NA	NA	1,043	156	5,646	1,170	403	97	37	7
Unknown	NA	NA	NA	NA	1,554	191	8,102	1,387	337	89	21	5
Subtotal	NA	1,743	4,554	52,032 <sup>d</sup>	37,862	498	198,256	5,004	12,644	475	33	1
Statewide <sup>c</sup>	111,420	96,824	72,100	107,866 <sup>d</sup>	88,912	590	400,531	5,727	33,369	738	38	1

<sup>a</sup>Number of eligible applicants selecting the management unit as their first choice to hunt.

<sup>b</sup>Number of successful applicants was sometimes larger than quota because of system processing errors.

<sup>c</sup>Column totals may not equal statewide totals because of rounding errors. Number of hunters does not add up to statewide total because hunters can hunt in more than one unit for the unlimited quota hunt.

<sup>d</sup>39,646 hunters purchased a hunting license for Hunt 234 without going through the lottery process.

Table 2. Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunt interference during the 2003 Michigan spring turkey hunting season. Estimates combined quota and unlimited quota hunts in each county.

County	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	95%		95%		95%		95%		95%		95%	
	Total	CL	Total	CL	Total	CL	%	CL	%	CL	%	CL
Alcona	2,269	197	9,016	1,043	502	113	22	5	48	6	87	4
Alger	37	26	121	99	2	1	5	4	33	31	72	30
Allegan	2,713	188	13,297	1,440	1,037	119	38	4	66	4	82	3
Alpena	1,361	168	5,744	920	400	98	29	6	49	7	86	5
Antrim	1,119	178	3,998	821	394	113	35	8	47	9	90	6
Arenac	706	123	2,638	618	245	73	35	8	59	9	92	5
Baraga <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Barry	2,487	182	10,776	1,110	902	114	36	4	69	4	85	3
Bay	312	72	1,327	356	93	40	30	11	47	12	88	7
Benzie	611	179	2,237	791	85	62	14	10	54	15	86	12
Berrien	564	89	2,562	615	230	58	41	8	70	7	78	7
Branch	874	118	3,974	703	303	68	35	6	68	6	86	5
Calhoun	1,887	171	8,003	975	691	96	37	4	73	4	89	3
Cass	1,062	123	4,421	618	467	81	44	6	74	5	87	4
Charlevoix	631	139	1,990	518	264	91	42	11	50	12	87	8
Cheboygan	1,139	180	3,934	796	407	114	36	8	53	9	86	6
Chippewa <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Clare	1,384	161	5,603	893	405	91	29	6	52	6	92	4
Clinton	1,732	158	7,297	837	685	100	40	5	71	4	84	3
Crawford	1,077	129	3,841	602	248	61	23	5	51	7	89	4
Delta	1,022	107	3,681	542	424	80	41	7	58	7	88	4

<sup>a</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated that they experienced no or only minor interference from other hunters.

<sup>d</sup>Not open for turkey hunting.

Table 2 (continued). Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunt interference during the 2003 Michigan spring turkey hunting season. Estimates combined quota and unlimited quota hunts in each county.

County	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Dickinson	923	83	3,305	382	288	57	31	6	54	6	88	4
Eaton	1,516	159	7,184	1,003	601	96	40	5	73	5	89	3
Emmet	726	148	2,631	616	212	81	29	10	56	11	89	7
Genesee	845	122	3,482	610	310	69	37	7	67	7	89	5
Gladwin	1,189	152	4,401	742	356	85	30	6	53	7	91	4
Gogebic <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Gd. Traverse	851	204	3,434	917	215	95	25	10	48	12	82	10
Gratiot	1,366	137	6,723	1,083	577	90	42	5	67	5	86	4
Hillsdale	1,196	131	5,378	792	455	81	38	5	66	5	81	4
Houghton <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Huron	1,311	146	6,036	865	392	75	30	5	66	5	84	4
Ingham	1,102	134	4,896	858	454	83	41	6	76	5	87	4
Ionia	1,847	167	7,961	1,034	715	102	39	4	71	4	84	3
Iosco	1,458	144	5,130	656	427	85	29	5	51	6	89	4
Iron	364	58	1,284	254	90	27	25	7	48	9	76	7
Isabella	1,562	155	6,836	1,108	765	107	49	5	71	5	91	3
Jackson	2,210	182	9,923	1,150	809	106	37	4	65	4	87	3
Kalamazoo	1,249	142	5,505	873	459	83	37	5	73	5	88	4
Kalkaska	1,138	260	4,026	1,014	362	163	32	12	45	12	90	7
Kent	2,838	209	11,479	1,141	1,143	130	40	4	70	4	84	3
Keweenaw <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0

<sup>a</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated that they experienced no or only minor interference from other hunters.

<sup>d</sup>Not open for turkey hunting.

Table 2 (continued). Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunt interference during the 2003 Michigan spring turkey hunting season. Estimates combined quota and unlimited quota hunts in each county.

County	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Lake	2,054	323	7,308	1,287	510	183	25	8	49	8	86	6
Lapeer	2,272	187	9,837	1,079	806	112	35	4	69	4	88	3
Leelanau	307	115	1,398	589	119	69	39	18	43	18	83	11
Lenawee	514	89	2,344	631	126	41	25	7	55	9	76	7
Livingston	1,148	138	4,189	674	434	83	38	6	72	6	83	5
Luce <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Mackinac <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Macomb	155	49	449	165	78	34	50	16	76	14	77	13
Manistee	1,117	238	4,759	1,123	257	119	23	9	51	11	86	8
Marquette	302	74	1,148	335	74	36	24	11	47	13	93	7
Mason	1,111	234	4,148	954	440	156	40	11	61	11	83	8
Mecosta	1,980	304	6,742	1,080	979	238	49	8	73	6	87	5
Menominee	1,399	94	5,121	593	553	79	40	5	58	5	91	3
Midland	1,421	143	5,196	706	618	94	44	5	65	5	90	3
Missaukee	1,148	253	4,221	1,002	342	141	30	10	46	11	83	10
Monroe	90	35	437	275	34	21	38	19	70	19	58	20
Montcalm	3,211	222	14,595	1,481	1,422	152	44	4	68	3	89	2
Montmorency	1,552	137	6,414	849	245	72	16	4	33	5	89	4
Muskegon	1,834	171	8,645	1,051	763	108	42	5	71	5	83	4
Newaygo	3,047	350	13,092	1,756	1,187	226	39	6	55	6	85	4
Oakland	669	94	2,773	479	156	42	23	6	64	7	81	6

<sup>a</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated that they experienced no or only minor interference from other hunters.

<sup>d</sup>Not open for turkey hunting.

Table 2 (continued). Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunt interference during the 2003 Michigan spring turkey hunting season. Estimates combined quota and unlimited quota hunts in each county.

County	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Oceana	1,058	181	5,116	1,101	432	133	41	9	70	8	74	8
Ogemaw	1,158	145	4,168	670	210	61	18	5	43	7	89	4
Ontonagon <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Osceola	1,649	289	5,557	1,029	652	201	40	9	52	9	86	7
Oscoda	1,297	163	4,301	624	194	63	15	5	38	6	90	4
Otsego	948	166	3,766	789	275	97	29	9	42	9	92	6
Ottawa	1,261	140	5,046	752	480	86	38	5	69	5	87	4
Presque Isle	1,004	131	4,040	696	313	85	31	7	47	8	85	6
Roscommon	1,226	148	4,704	733	183	55	15	4	37	6	83	5
Saginaw	1,986	173	8,320	910	839	110	42	4	71	4	86	3
St. Clair	1,294	135	5,426	749	472	86	36	5	64	5	83	4
St. Joseph	823	114	4,233	779	287	66	35	7	64	7	86	5
Sanilac	1,981	182	9,136	1,195	657	101	33	4	63	5	81	4
Schoolcraft <sup>d</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Shiawassee	1,141	139	5,398	950	418	79	37	6	69	6	88	4
Tuscola	2,346	185	10,529	1,189	881	114	38	4	66	4	85	3
Van Buren	1,512	161	7,611	1,134	641	105	42	5	74	5	88	4
Washtenaw	648	102	2,451	499	183	54	28	7	68	8	85	6
Wayne	8	9	8	9	4	6	50	59	100	0	100	0
Wexford	1,383	263	5,142	1,074	436	167	32	10	53	10	87	7
Unknown	2,019	229	8,692	1,190	257	75	13	4	40	5	82	5

<sup>a</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated that they experienced no or only minor interference from other hunters.

<sup>d</sup>Not open for turkey hunting.

Table 3. Estimated number and proportion of hunters hunting on private and public lands during the spring 2003 Michigan turkey hunting season.

Management unit	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL
Hunt periods with quotas																
A	1,159	109	69	6	319	84	19	5	188	67	11	4	8	15	1	1
AA	309	57	34	6	422	61	46	6	143	43	16	5	35	23	4	3
B	1,570	134	74	6	382	106	18	5	176	75	8	4	0	0	0	0
E	785	76	65	6	277	63	23	5	119	45	10	4	24	21	2	2
F	555	70	50	6	448	67	40	6	89	36	8	3	16	17	1	1
H	271	58	26	6	649	68	63	6	95	38	9	4	11	14	1	1
J	1,425	172	54	6	830	156	31	6	357	115	14	4	25	33	1	1
K	3,587	402	57	6	1,657	344	26	5	1,050	294	17	5	55	74	1	1
L	241	44	35	6	368	47	53	6	75	28	11	4	12	12	2	2
M	397	42	61	6	171	36	26	5	82	27	12	4	4	6	1	1
MA	103	15	46	7	72	14	32	6	50	13	22	6	0	0	0	0
N	781	64	72	5	163	46	15	4	131	42	12	4	5	9	1	1
O	571	60	67	6	204	50	24	6	77	33	9	4	0	0	0	0
P	71	15	38	7	100	15	53	8	17	8	9	4	0	0	0	0
PB	71	7	69	6	23	6	22	5	6	3	6	3	3	2	3	2
Q	315	52	43	7	347	53	48	7	65	29	9	4	0	0	0	0
QB	66	16	27	6	159	18	66	7	15	8	6	3	0	0	0	0
QD	7	2	38	9	7	2	38	9	4	1	19	7	1	1	6	5
R	117	19	45	7	111	19	43	7	33	12	13	5	0	0	0	0
RA	19	3	95	1	1	0	5	1	0	0	0	0	0	0	0	0

<sup>a</sup>Licenses for the unlimited quota hunt were valid only on private lands in the southern Michigan zone (Figure 1).

Table 3 (continued). Estimated number and proportion of hunters hunting on private and public lands during the spring 2003 Michigan turkey hunting season.

Management unit	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL
Hunt periods with quotas																
S	76	6	85	5	9	4	10	5	5	3	5	3	0	0	0	0
T	403	73	37	6	561	78	51	7	123	47	11	4	12	16	1	1
U	360	59	44	7	323	57	40	7	123	41	15	5	10	13	1	2
UA	314	46	49	7	235	44	36	7	92	31	14	5	4	7	1	1
UB	78	8	73	7	18	6	17	6	10	5	9	5	0	0	0	0
V	354	64	34	6	554	70	53	6	132	44	13	4	11	14	1	1
W	424	33	78	5	75	24	14	4	41	19	8	3	0	0	0	0
X	312	67	29	6	640	76	59	7	115	45	11	4	12	16	1	1
Y	216	39	33	6	389	41	60	6	44	20	7	3	4	6	1	1
Z	176	23	55	7	115	21	36	6	24	11	7	3	5	5	2	2
ZA	121	26	27	6	278	30	63	6	36	16	8	4	6	7	1	2
Subtotal	15,255	526	53	2	9,904	463	34	2	3,515	363	12	1	264	98	1	1
Hunt period 301 with quota (Management Unit ZZ; April 21-May 4, 2003)																
L	1,617	124	100	0	0	0	0	0	0	0	0	0	0	0	0	0
P	638	80	100	0	0	0	0	0	0	0	0	0	0	0	0	0
PB	948	97	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	1,533	121	100	0	0	0	0	0	0	0	0	0	0	0	0	0
QB	248	49	100	0	0	0	0	0	0	0	0	0	0	0	0	0
QD	40	19	100	0	0	0	0	0	0	0	0	0	0	0	0	0
R	1,427	117	100	0	0	0	0	0	0	0	0	0	0	0	0	0

<sup>a</sup>Licenses for the unlimited quota hunt were valid only on private lands in the southern Michigan zone (Figure 1).

Table 3 (continued). Estimated number and proportion of hunters hunting on private and public lands during the spring 2003 Michigan turkey hunting season.

Management unit	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	95% %	95% CL	Total	95% CL	95% %	95% CL	Total	95% CL	95% %	95% CL	Total	95% CL	95% %	95% CL
Hunt period 301 with quota (Management Unit ZZ; April 21-May 4, 2003)																
RA	885	94	100	0	0	0	0	0	0	0	0	0	0	0	0	0
S	2,803	159	100	0	0	0	0	0	0	0	0	0	0	0	0	0
T	2,457	151	100	0	0	0	0	0	0	0	0	0	0	0	0	0
U	1,333	113	100	0	0	0	0	0	0	0	0	0	0	0	0	0
UA	673	82	100	0	0	0	0	0	0	0	0	0	0	0	0	0
UB	613	78	100	0	0	0	0	0	0	0	0	0	0	0	0	0
W	1,313	112	100	0	0	0	0	0	0	0	0	0	0	0	0	0
X	1,485	119	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Y	1,129	105	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Z	1,770	128	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZA	1,148	106	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	1,035	103	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	22,111	138	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Unlimited quota hunt period (Hunt 234; May 5-31, 2003)																
A	356	92	83	9	52	35	12	8	22	23	5	5	0	0	0	0
AA	169	64	44	12	165	62	43	12	37	30	10	7	15	19	4	5
B	259	78	70	12	73	42	20	10	36	30	10	8	0	0	0	0
E	1,440	182	66	5	542	113	25	5	198	69	9	3	0	0	0	0
F	381	95	49	9	353	91	45	9	44	33	6	4	7	13	1	2
H	272	80	24	6	717	129	63	7	147	59	13	5	0	0	0	0

<sup>a</sup>Licenses for the unlimited quota hunt were valid only on private lands in the southern Michigan zone (Figure 1).

Table 3 (continued). Estimated number and proportion of hunters hunting on private and public lands during the spring 2003 Michigan turkey hunting season.

Manage- ment unit	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	95% %	95% CL	Total	95% CL	95% %	95% CL	Total	95% CL	95% %	95% CL	Total	95% CL	95% %	95% CL
Unlimited quota hunt period (Hunt 234; May 5-31, 2003)																
J	919	145	57	6	484	106	30	5	197	68	12	4	22	23	1	1
K	5,073	329	59	3	2,212	224	26	2	1,278	173	15	2	36	30	1	1
L <sup>a</sup>	1,577	191	100	0	0	0	0	0	0	0	0	0	0	0	0	0
M	131	56	49	15	84	44	31	14	45	33	17	11	7	13	3	5
MA	82	44	58	20	52	35	37	20	7	13	5	9	0	0	0	0
N	220	71	69	12	60	38	19	11	39	30	12	9	0	0	0	0
O	321	87	66	11	102	50	21	9	59	38	12	7	7	13	1	3
P <sup>a</sup>	752	133	100	0	0	0	0	0	0	0	0	0	0	0	0	0
PB <sup>a</sup>	712	129	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Q <sup>a</sup>	1,647	195	100	0	0	0	0	0	0	0	0	0	0	0	0	0
QB <sup>a</sup>	367	93	100	0	0	0	0	0	0	0	0	0	0	0	0	0
QD <sup>a</sup>	38	30	100	0	0	0	0	0	0	0	0	0	0	0	0	0
R <sup>a</sup>	1,205	168	100	0	0	0	0	0	0	0	0	0	0	0	0	0
RA <sup>a</sup>	878	143	100	0	0	0	0	0	0	0	0	0	0	0	0	0
S <sup>a</sup>	1,958	212	100	0	0	0	0	0	0	0	0	0	0	0	0	0
T <sup>a</sup>	2,235	226	100	0	0	0	0	0	0	0	0	0	0	0	0	0
U	1,646	195	96	2	36	30	2	2	15	19	1	1	15	19	1	1
UA	1,138	163	87	5	67	40	5	3	89	46	7	3	7	13	1	1
UB <sup>a</sup>	652	124	100	0	0	0	0	0	0	0	0	0	0	0	0	0
V	668	125	49	7	537	111	40	6	117	53	9	4	29	27	2	2

<sup>a</sup>Licenses for the unlimited quota hunt were valid only on private lands in the southern Michigan zone (Figure 1).

Table 3 (continued). Estimated number and proportion of hunters hunting on private and public lands during the spring 2003 Michigan turkey hunting season.

Manage- ment unit	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL
Unlimited quota hunt period (Hunt 234; May 5-31, 2003)																
W <sup>a</sup>	1,350	177	100	0	0	0	0	0	0	0	0	0	0	0	0	0
X <sup>a</sup>	1,252	170	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Y <sup>a</sup>	1,095	160	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Z <sup>a</sup>	1,614	193	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZA <sup>a</sup>	1,043	156	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	1,255	172	81	5	146	59	9	4	58	38	4	2	95	48	6	3
Subtotal	29,953	551	79	1	4,679	318	12	1	3,004	260	8	1	226	74	1	1
Statewide <sup>b</sup>	67,304	775	76	1	14,576	562	16	1	6,520	446	7	0	512	124	1	1

<sup>a</sup>Licenses for the unlimited quota hunt were valid only on private lands in the southern Michigan zone (Figure 1).

<sup>b</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one unit for the unlimited quota hunt.

Table 4. How hunters rated their hunting experience during the spring 2003 Michigan turkey hunting season.

Management unit	Satisfaction level (% of hunters) <sup>a</sup>					
	Excellent	Very good	Good	Fair	Poor	No answer
Hunt periods with quotas						
A	15	14	27	18	25	0
AA	7	9	19	22	42	2
B	6	14	19	27	31	2
E	15	19	25	22	19	0
F	12	17	24	18	26	2
H	15	18	23	21	22	2
J	15	16	22	19	26	2
K	18	21	21	22	18	0
L	15	20	29	22	11	2
M	15	10	30	29	15	1
MA	9	14	22	24	30	2
N	19	17	27	23	14	0
O	14	18	29	20	16	2
P	18	13	38	15	15	1
PB	12	28	26	19	14	1
Q	17	17	27	22	16	1
QB	16	15	34	18	12	5
QD	19	13	38	31	0	0
R	19	23	23	20	12	3
RA	23	8	32	23	8	8
S	19	22	29	12	16	2
T	22	14	27	19	15	3
U	13	18	32	25	10	2
UA	22	17	31	24	5	1
UB	11	16	36	25	11	2
V	10	13	22	21	33	1
W	13	18	29	24	15	1
X	19	14	30	20	16	1
Y	13	22	32	21	10	1
Z	20	22	26	17	12	3
ZA	19	20	25	20	15	1
Mean <sup>b</sup>	15	17	25	21	20	1

<sup>a</sup>Row totals may not equal 100% because of rounding errors.

<sup>b</sup>Mean satisfaction levels for hunt periods with quotas.

Table 4 (continued). How hunters rated their hunting experience during the spring 2003 Michigan turkey hunting season.

	Satisfaction level (% of hunters) <sup>a</sup>					
Manage- ment unit	Excellent	Very good	Good	Fair	Poor	No answer
Hunt period 301 with quota (Management Unit ZZ; April 21-May 4, 2003)						
L	23	23	26	20	7	2
P	23	19	30	21	6	2
PB	26	18	28	16	7	4
Q	25	24	25	15	9	2
QB	34	11	32	14	7	2
QD	24	14	43	0	9	9
R	24	23	29	15	7	2
RA	29	23	26	13	5	3
S	23	23	27	16	8	1
T	21	19	31	18	9	1
U	24	25	26	15	9	2
UA	23	29	29	8	8	2
UB	21	24	24	23	7	1
W	20	22	29	20	7	2
X	26	20	26	19	7	2
Y	24	26	26	15	7	2
Z	25	28	23	13	8	3
ZA	22	21	31	18	6	1
Unknown	19	19	27	23	9	4
Mean <sup>b</sup>	24	23	27	17	8	2

<sup>a</sup>Row totals may not equal 100% because of rounding errors.

<sup>b</sup>Mean satisfaction levels for Hunt 301.

Table 4 (continued). How hunters rated their hunting experience during the spring 2003 Michigan turkey hunting season.

2003 Michigan turkey hunting season.

Manage- ment unit	Satisfaction level (% of hunters) <sup>a</sup>					No answer
	Excellent	Very good	Good	Fair	Poor	
Unlimited quota hunt period (Hunt 234; May 6-31, 2003)						
A	7	9	21	31	32	0
AA	8	10	11	25	42	4
B	8	10	28	16	32	6
E	10	15	25	26	22	2
F	9	11	28	24	25	4
H	4	9	20	34	32	2
J	13	15	19	28	23	2
K	10	16	26	24	22	1
L	14	22	30	19	14	1
M	5	20	25	36	14	0
MA	5	6	42	21	26	0
N	3	10	31	31	25	0
O	11	15	18	24	27	4
P	15	16	30	25	9	5
PB	21	20	29	18	12	0
Q	19	19	24	22	14	1
QB	15	7	34	24	18	2
QD	41	3	19	19	19	0
R	15	19	32	19	13	2
RA	17	26	25	21	7	3
S	16	21	28	18	14	3
T	11	16	31	24	15	2
U	22	19	25	18	13	3
UA	12	20	29	23	12	3
UB	26	24	21	17	10	2
V	6	10	19	25	35	3
W	18	19	28	21	14	2
X	23	15	31	12	16	2
Y	15	24	28	19	11	4
Z	16	20	27	26	10	1
ZA	15	23	29	18	11	5
Unknown	11	13	24	25	22	5
Mean <sup>b</sup>	14	17	26	23	19	2
Statewide <sup>c</sup>	17	18	26	21	16	2

<sup>a</sup>Row totals may not equal 100% because of rounding errors.

<sup>b</sup>Mean satisfaction levels for Hunt 234.

<sup>c</sup>Statewide mean satisfaction levels (all hunts and periods).

Table 5. Estimated amount of hunter interference experienced by turkey hunters during the spring 2003 Michigan turkey hunting season.

Management unit	Interference level (% of hunters) <sup>a</sup>				
	None	Minor	Some irritation	Major problem	No answer
Hunt periods with quotas					
A	65	19	14	2	1
AA	70	19	10	1	1
B	65	22	6	5	2
E	74	20	4	1	1
F	64	23	11	1	1
H	59	23	14	3	2
J	65	25	8	1	1
K	67	20	11	2	1
L	52	24	18	5	2
M	61	29	6	2	2
MA	46	28	16	9	1
N	64	26	7	2	1
O	66	24	8	0	2
P	54	25	14	5	1
PB	62	27	9	1	1
Q	60	22	13	4	2
QB	52	29	12	4	3
QD	69	6	25	0	0
R	57	25	8	6	4
RA	73	8	5	8	8
S	68	19	9	5	0
T	61	24	10	2	2
U	53	31	10	5	1
UA	53	29	13	3	1
UB	53	36	9	0	2
V	67	23	8	2	1
W	71	18	7	2	2
X	55	29	12	2	2
Y	48	37	9	5	1
Z	58	23	12	4	3
ZA	54	30	10	5	0
Mean <sup>b</sup>	63	23	10	2	1

<sup>a</sup>Row totals may not equal 100% because of rounding errors.

<sup>b</sup>Mean interference levels for hunt periods with quotas.

Table 5 (continued). Estimated amount of hunter interference experienced by turkey hunters during the spring 2003 Michigan turkey hunting season.

Management unit	Interference level (% of hunters) <sup>a</sup>				
	None	Minor	Some irritation	Major problem	No answer
Hunt period 301 with quota (Management Unit ZZ; April 21-May 4, 2003)					
L	61	26	10	3	1
P	64	26	8	1	1
PB	54	26	15	3	2
Q	55	26	13	4	2
QB	58	22	13	5	2
QD	64	8	9	19	0
R	58	28	10	2	2
RA	60	27	10	2	1
S	57	27	12	3	1
T	56	26	13	4	1
U	63	24	10	1	1
UA	52	30	13	3	2
UB	57	27	11	5	1
W	64	28	5	2	1
X	55	30	9	3	2
Y	60	25	11	2	2
Z	57	26	14	1	2
ZA	61	25	8	3	2
Unknown	61	22	12	3	3
Mean <sup>b</sup>	59	26	11	3	2

<sup>a</sup>Row totals may not equal 100% because of rounding errors.

<sup>b</sup>Mean interference levels for Hunt 301.

Table 5 (continued). Estimated amount of hunter interference experienced by turkey hunters during the spring 2003 Michigan turkey hunting season.

Management unit	Interference level (% of hunters) <sup>a</sup>				
	None	Minor	Some irritation	Major problem	No answer
Unlimited quota hunt period (Hunt 234; May 6-31, 2003)					
A	69	17	5	7	2
AA	73	17	6	2	2
B	80	12	0	4	4
E	71	19	6	2	2
F	68	21	6	3	3
H	74	17	6	1	2
J	66	22	6	3	3
K	60	26	11	2	1
L	59	25	11	4	1
M	53	31	11	6	0
MA	54	26	15	5	0
N	68	25	7	0	0
O	74	15	6	1	3
P	56	28	11	1	4
PB	63	26	8	3	0
Q	70	23	5	1	1
QB	68	16	8	4	4
QD	43	0	57	0	0
R	63	22	10	2	2
RA	71	18	9	0	2
S	68	21	7	1	3
T	63	23	10	3	1
U	70	19	7	3	2
UA	50	33	10	4	2
UB	65	26	6	1	2
V	66	22	9	1	2
W	73	17	6	2	3
X	70	19	8	1	1
Y	68	18	9	2	3
Z	63	24	11	1	1
ZA	66	20	9	2	3
Unknown	66	19	7	2	7
Mean <sup>b</sup>	66	22	8	2	2
Statewide <sup>c</sup>	63	23	9	2	2

<sup>a</sup>Row totals may not equal 100% because of rounding errors.

<sup>b</sup>Mean interference levels for Hunt 234.

<sup>c</sup>Statewide mean interference levels (all hunts and periods).

Table 6. Estimated number of hunting efforts, hunters, hunting success, noninterfered hunters, and hunter rating of the 2003 spring turkey hunting season, by hunt periods.

Variable	Hunt periods beginning								All periods <sup>a</sup>	
	April 21		April 28		May 5		May 12			
	Estimate	95% CL	Estimate	95% CL	Estimate	95% CL	Estimate	95% CL	Estimate	95% CL
Hunting efforts (days)	150,963	2,774	35,918	2,039	203,999	5,033	9,651	1,014	400,531	5,727
Number of hunters	37,259	522	10,424	494	39,484	515	1,745	133	88,912	590
Successful hunters (n)	16,304	486	3,541	383	13,022	479	502	78	33,369	738
Successful hunters (%)	44	1	34	3	33	1	29	4	38	1
Noninterfered hunters (n) <sup>b</sup>	31,991	549	8,915	486	34,517	550	1,481	125	76,904	717
Noninterfered hunters (%) <sup>b</sup>	86	1	86	2	87	1	85	3	86	1
Favorable rating (n) <sup>c</sup>	24,851	525	5,925	440	22,352	557	1,063	108	54,190	799
Favorable rating (%) <sup>c</sup>	67	1	57	3	57	1	61	4	61	1

<sup>a</sup>Row totals may not equal totals for all periods because of rounding errors.

<sup>b</sup>Proportion of hunters that indicated that they experienced no or only minor interference from other hunters.

<sup>c</sup>Hunters rating their hunting experience as excellent, very good, or good.

Table 7. Comparison of the estimated number of hunters, hunting effort, and harvest between 2002 and 2003 in Michigan spring turkey hunting season, summarized by regions.

Region <sup>a</sup>	Hunters (No.) <sup>b</sup>					Hunting efforts (days)					Harvest (No.)				
	2002		2003		Change (%)	2002		2003		Change (%)	2002		2003		Change (%)
	Total	95% CL	Total	95% CL		Total	95% CL	Total	95% CL		Total	95% CL	Total	95% CL	
UP	4,283	137	3,894	171	-9	15,821	804	14,659	1,001	-7	1,621	135	1,431	133	-12
NLP	35,029	456	34,767	601	-1	147,449	3,463	143,497	4,122	-3	11,213	539	11,296	573	1
SLP	47,474	390	49,739	580	5	216,474	3,283	233,683	4,769	8	17,859	412	20,386	482	14
Unknown	2,121	219	2,019	229		8,555	1,000	8,692	1,190		174	54	257	75	
Total	87,538	431	88,912	590	2	388,299	4,440	400,531	5,727	3	30,867	681	33,369	738	8

<sup>a</sup>Regions included the Upper Peninsula (UP), the northern Lower Peninsula north of Management Unit ZZ (NLP), and Management Unit ZZ in the southern Lower Peninsula (SLP).

<sup>b</sup>Number of hunters did not add up to statewide total because hunters can hunt in more than one unit for the unlimited quota hunt.

Table 8. Comparison of estimated hunter success, hunter satisfaction, and hunt interference between 2002 and 2003 in Michigan spring turkey hunting season, summarized by regions.

Region <sup>a</sup>	Hunter success					Hunter satisfaction <sup>b</sup>					Noninterfered hunters <sup>c</sup>				
	2002		2003		Differ- ence (%)	2002		2003		Differ- ence (%)	2002		2003		Differ- ence (%)
	%	95% CL	%	95% CL		%	95% CL	%	95% CL		%	95% CL	%	95% CL	
UP	38	3	37	3	-1	59	3	56	3	-2	88	2	89	2	1
NLP	32	1	32	2	0	54	2	52	2	-2	88	1	88	1	0
SLP	38	1	41	1	3	65	1	69	1	3	84	1	86	1	2
Total	35	1	38	1	2	60	1	61	1	1	86	1	86	1	1

<sup>a</sup>Regions included the Upper Peninsula (UP), the northern Lower Peninsula north of Management Unit ZZ (NLP), and Management Unit ZZ in the southern Lower Peninsula (SLP).

<sup>b</sup>Hunters rating their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated that they experienced no or only minor interference from other hunters.

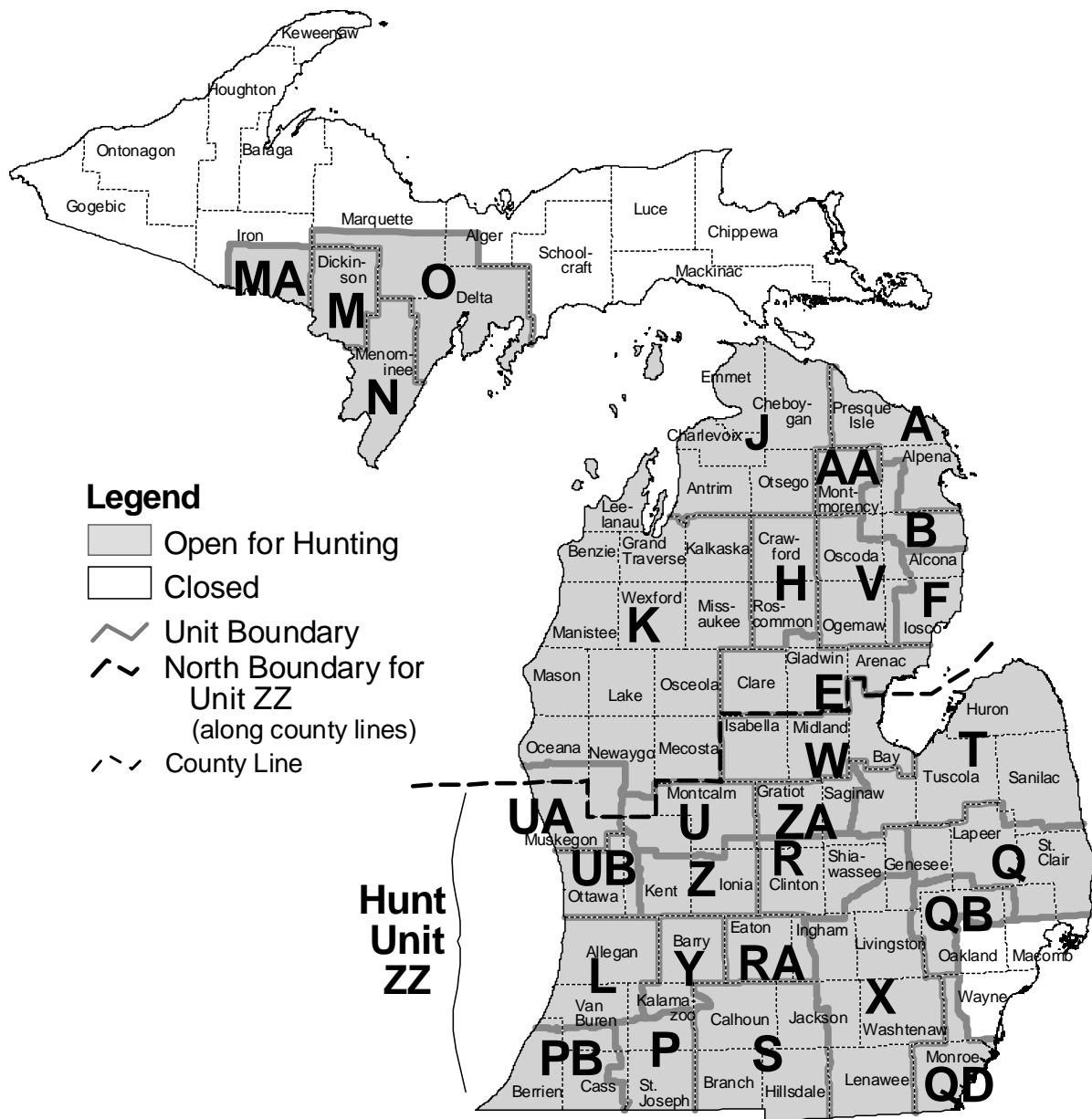


Figure 1. Management units in Michigan open to spring turkey hunting in 2003.

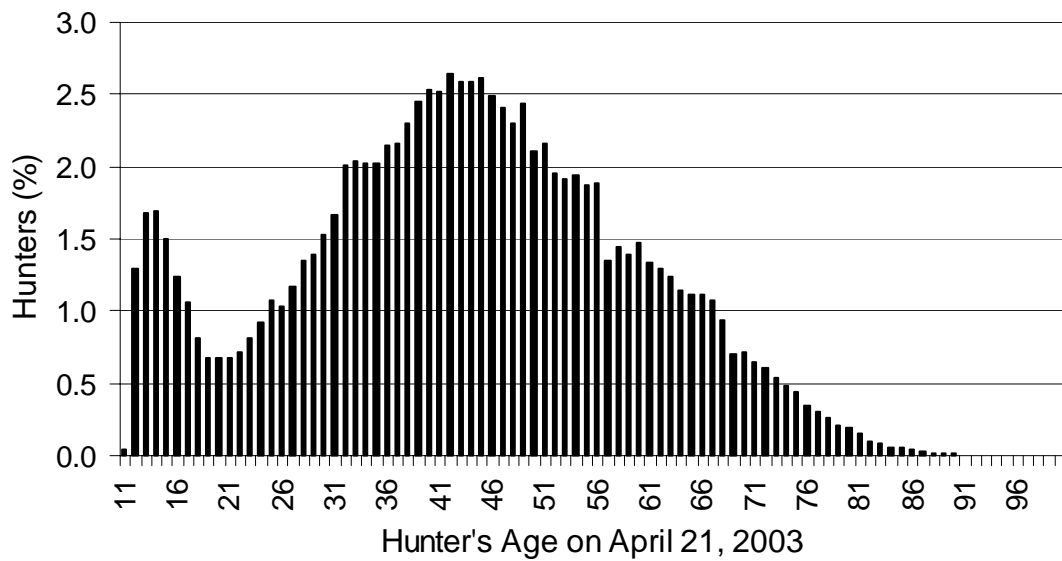


Figure 2. Age of people that purchased a turkey hunting license in Michigan for the 2003 spring hunting season ( $\bar{x}$  = 43 years). Licenses were purchased by 107,866 people.

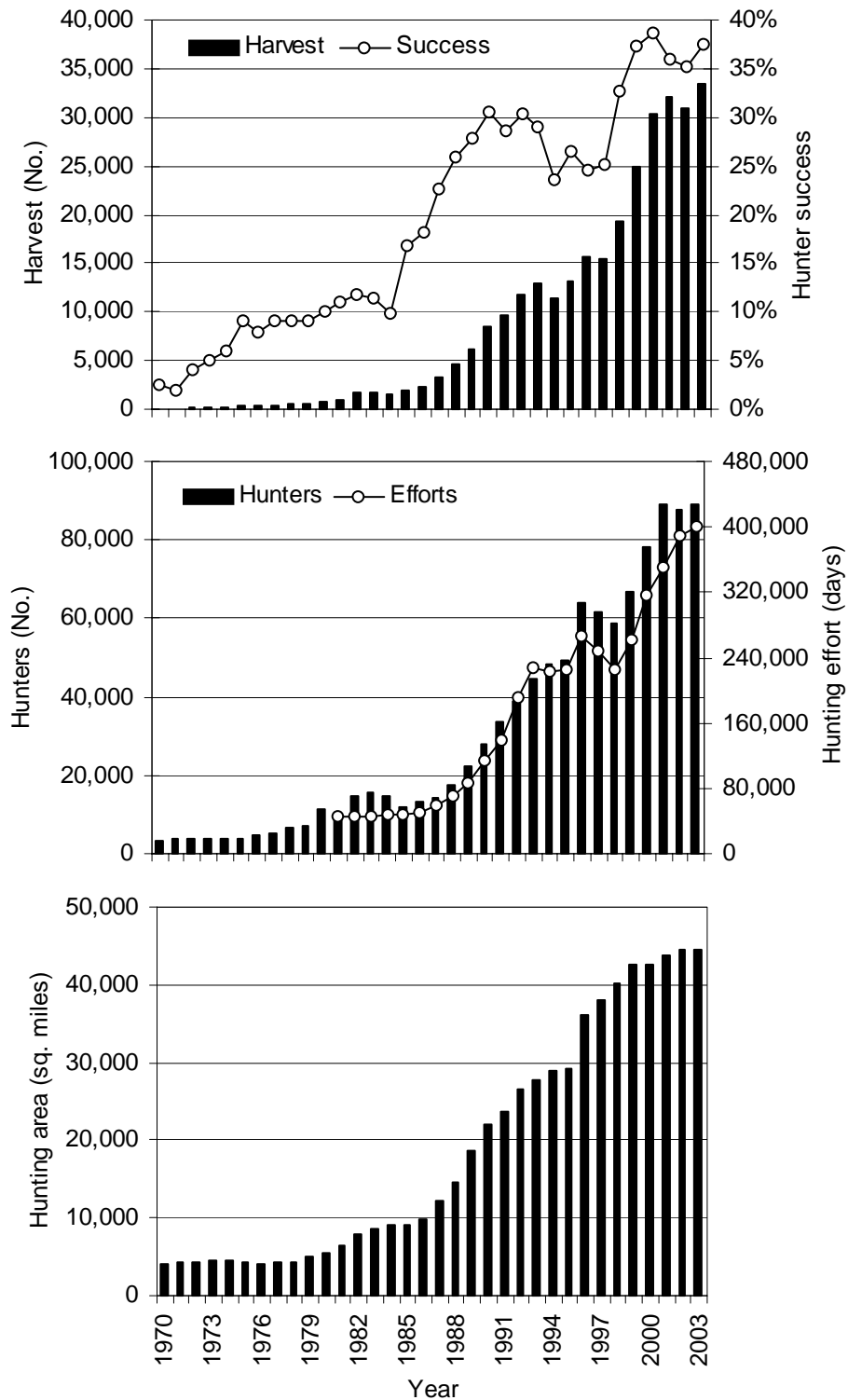


Figure 3. Estimated number of hunters, harvest, hunting efforts, and hunting success during the spring turkey hunting season, 1970-2003. Estimates of hunting effort generally were not available before 1981.

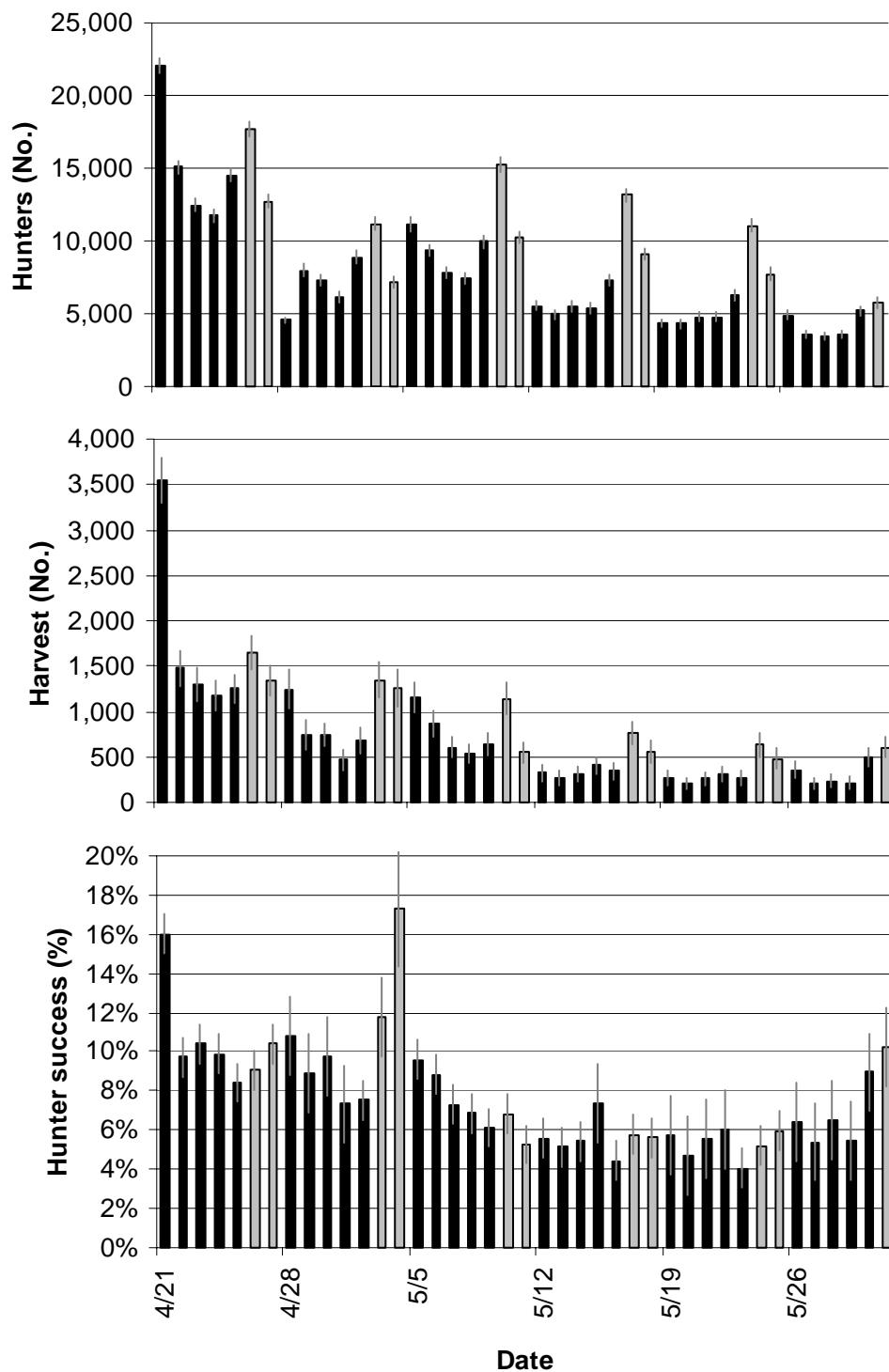


Figure 4. Estimated number of hunters, harvest, and hunter success by date during the 2003 spring turkey hunting season (includes all hunts). An additional  $2,157 \pm 227$  birds were taken on unknown dates. Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval.

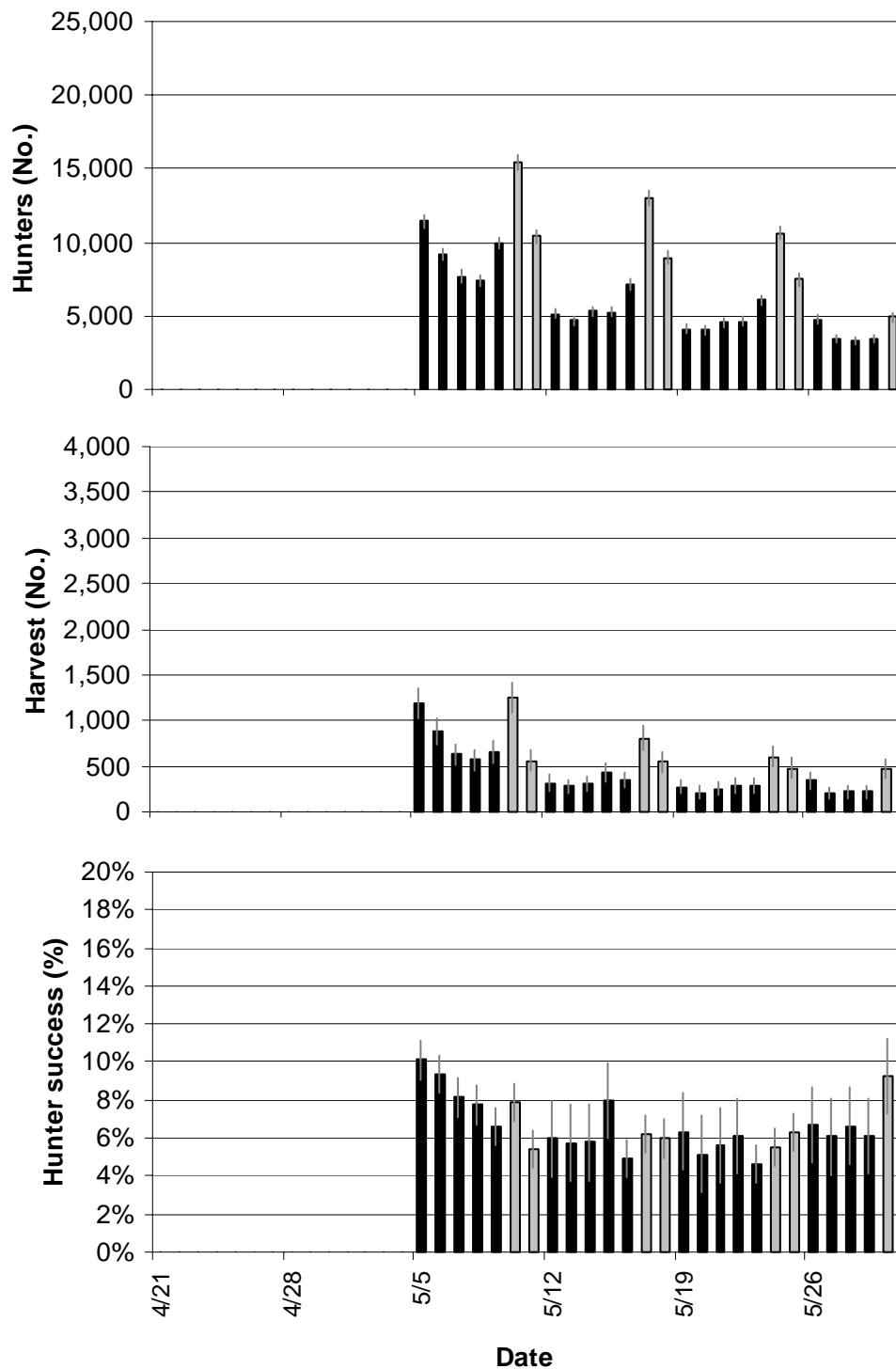


Figure 5. Estimated number of hunters, harvest, and hunter success by date during Hunt 234 of the 2003 spring turkey hunting season (May 5-31). An additional  $885 \pm 145$  birds were taken on unknown dates. Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval.

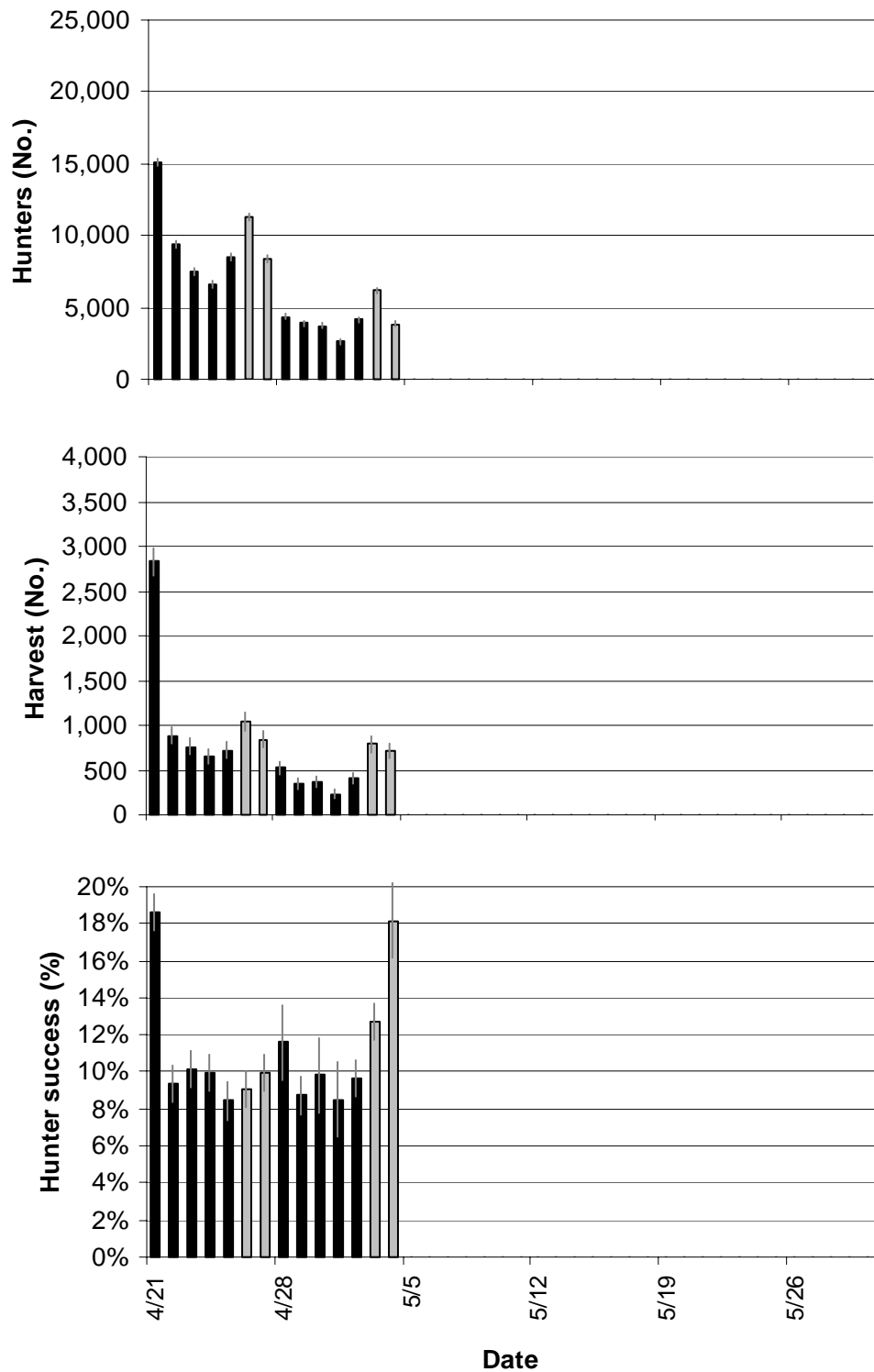


Figure 6. Estimated number of hunters, harvest, and hunter success by date during Hunt 301 of the 2003 spring turkey hunting season (April 21-May 4). An additional  $808 \pm 91$  birds were taken on unknown dates. Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval.

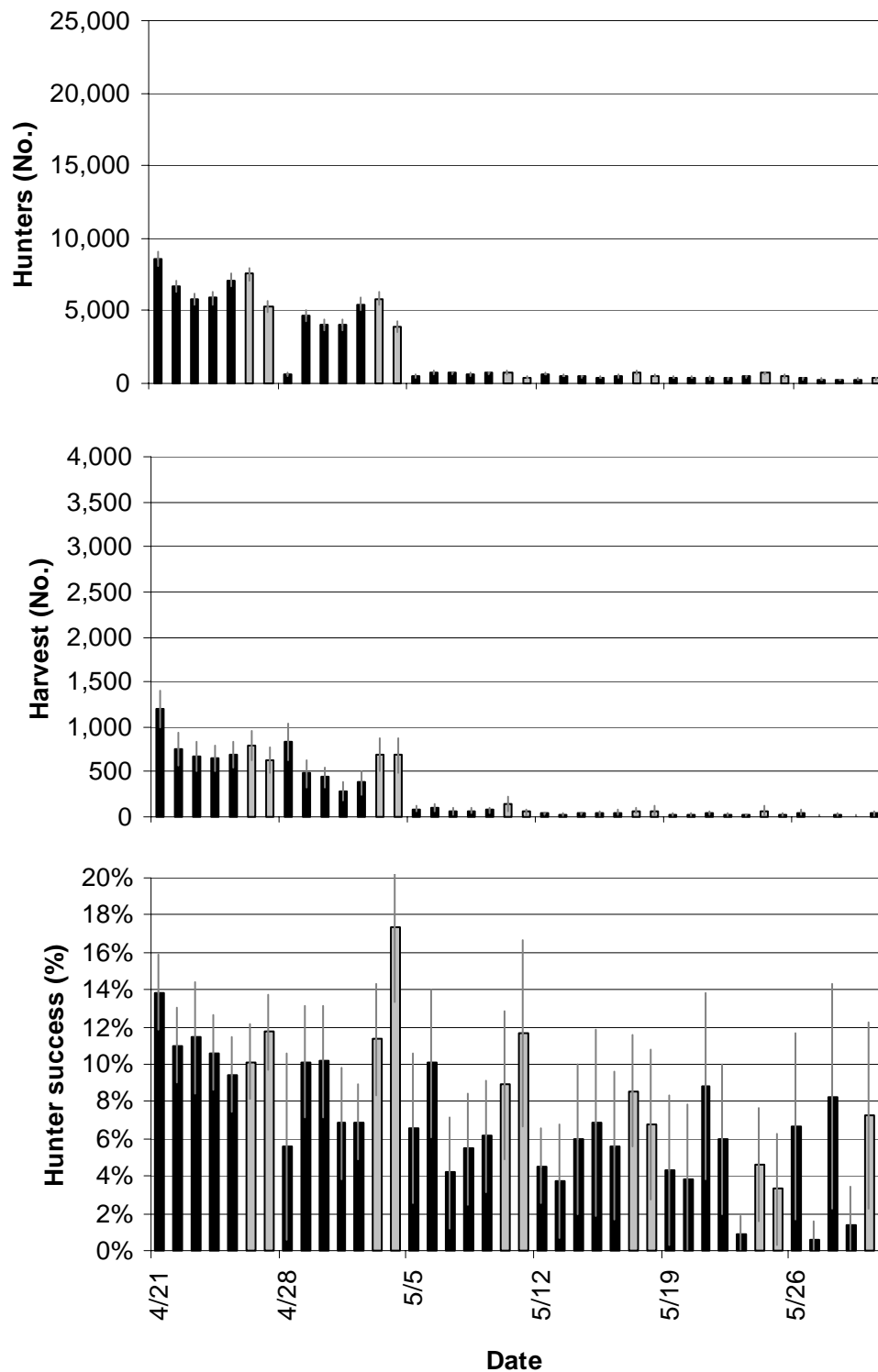


Figure 7. Estimated number of hunters, harvest, and hunter success by date during all hunts except hunts 234 and 301 of the 2003 spring turkey hunting season. An additional  $489 \pm 151$  birds were taken on unknown dates. Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval.

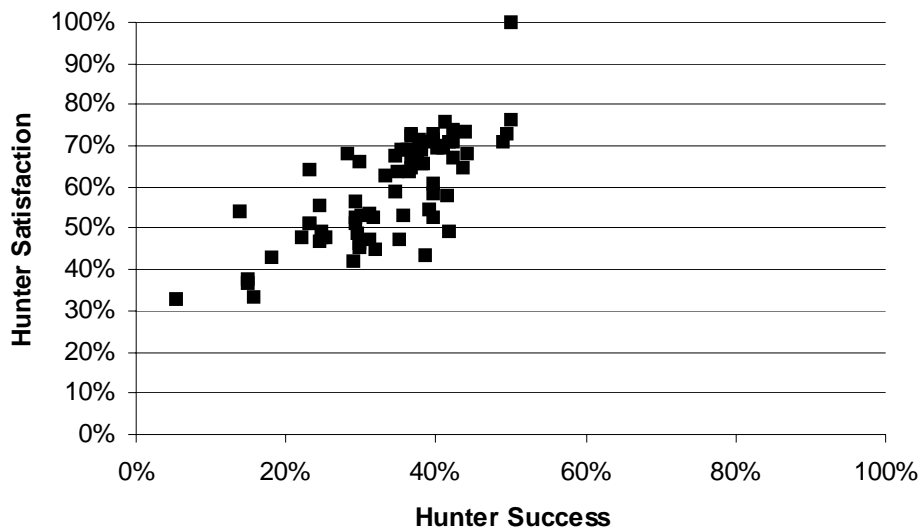


Figure 8. Relationship between hunter satisfaction (expressed as the percentage of hunters rating their hunting experience as excellent, very good, or good) and hunter success for each of 73 counties in Michigan during the 2003 spring turkey hunting season.

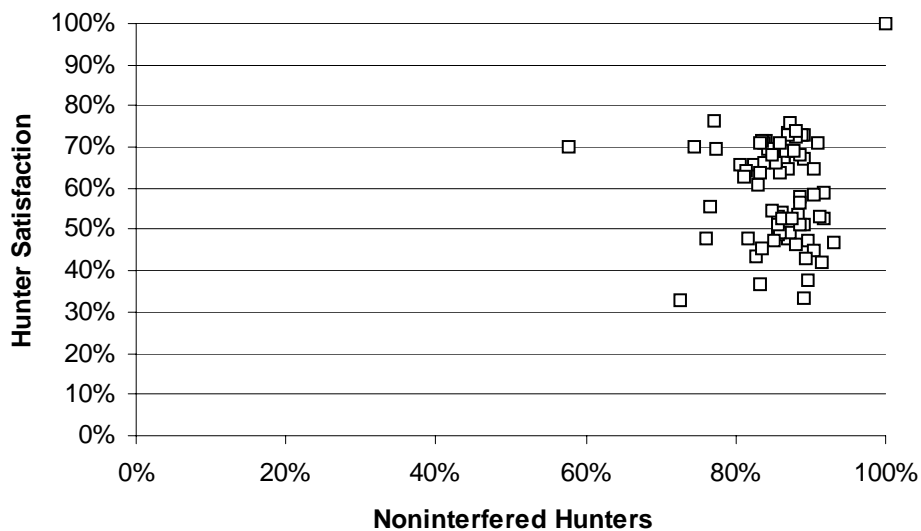


Figure 9. Relationship between hunter satisfaction (expressed as the percentage of hunters rating their hunting experience as excellent, very good, or good) and hunter interference for each of 73 counties in Michigan during the 2003 spring turkey hunting season. Noninterfered hunters were the proportion of hunters that indicated that they experienced no or only minor interference from other hunters.